

SUDDEN WHITENING OF THE HAIR *

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THE phenomenon of sudden blanching of the hair has been the subject of debate and speculation for hundreds of years. Vehement assertions both of its occurrence and impossibility are found in the medical literature of the past three centuries. However, it was not the physician but rather the historian who first seized on stories of sudden whitening to dramatize the tribulations of famous persons, principally in their grief or fear, in order to interest and astonish the reader. The poet, too, found poignancy in this phenomenon. Thus Sir Walter Scott in *Marmion*:

For deadly fear can time outgo,
 And blanch at once the hair.
 Hard toil can roughen form and face,
 And want can quench the eye's bright grace;
 Nor does old age a wrinkle trace
 More deeply than despair.

Shakespeare also made reference to sudden blanching when, in the first part of *King Henry IV*, Sir John Falstaff says to Hotspur: "Worcester is stolen away tonight. Thy father's beard is turned white with the news." The phrase "it was enough to turn one's hair white" and, similarly, in German, "*sich graue Haare etwas wachsen lassen*," show the popular concept of the association of worrying and graying. It is a generally accepted belief that prolonged anxiety is associated with premature gray hair and that sudden emotional shock may produce sudden whitening.

At this point it is as well to define terms. "Whitening" is better used for most events where there is sudden apparently complete loss of hair pigmentation. "Graying" is the word for a more or less even mixture of pigmented and unpigmented hairs such as develops in aging. Synonyms for white hair are "canities" and "poliosis." Convention, how-

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ever, makes canities appropriate when the entire scalp is affected, whereas poliosis bespeaks whiteness in a segment, such as a forelock.

A review of historical and medical literature on the subject of sudden blanching is both instructive and amusing. At times the debate reached an acrimonious pitch like that of the momentous controversy that used to occupy theologians when they tried to settle the number of angels that could dance on the head of a pin. The great dermatologists Ferdinand von Hebra and Moritz Kaposi relegated sudden canities to the category of fable. Yet numerous affirmations kept appearing persistently in medical literature, and formal history is laced with stories of dramatic overnight whitening of scalp hair. Let us first review these reports; later we can speculate on theories of causation.

Typical is a story of D'Alben:¹ a 24-year-old officer in the regiment of Touraine in 1781 spent the night in carnal dissipation with a mulatto, after which he had violent spasms making flexion of the body impossible. The beard and hair on the right side became as white as snow; the left remained unchanged. One wonders if the decolorization would have been complete had she not been a mulatto.

Smiley² in the *Boston Medical and Surgical Journal* of 1851 reports a moralistic tale of a gambler who staked \$1,100 on a single card (his all and, it should be remembered, this was 1851). The next day his hair was white. Unfortunately the author does not tell us how the bet came out. The gambler must have lost—or suffered the shock of winning, for a change. In the same paper there is a story of a 30-year-old man, sick in a mining camp who, left alone, fell asleep and on awakening suddenly found a grizzly bear standing over him. The scare occasioned by the appropriately named bear turned our hero grizzly too.

These random stories underscore a recurring theme, summed up by Rayer in 1812:³ “. . . paroxysms of rage, unexpected and unwelcome news, habitual headache, overindulgence in sexual appetite and anxiety have been known to blanch the hair prematurely.” In most of these accounts a cautionary note is sounded, a disapproving Victorian eyebrow is raised, a Calvinistic conscience is pricked. Even as late as 1940, McCarthy, in his textbook *Diseases of the Hair*,⁴ makes the firm statement that not only is sudden graying an indubitable occurrence, but also that rape of young girls is a common cause. But the moralistic finger wags only at the commoner. It is entirely a different and more heroic matter when the phenomenon strikes heads of state.

One of the earliest documents recording sudden canities must surely be in the *Chronique D'Arras* (1604),⁵ translated from the old French text by Cumston⁶ as follows:

A young gentlemen of the court of Emperor Charles V, becoming in love with a young lady, went so far, that partly from love, partly by force, he plucked the flower of her virginity: which having been discovered he was imprisoned, especially because the act was committed on the premises of the Emperor, and he was condemned to lose his head. Then, having been informed that evening that his life would be ended on the following day, this very same night was for him so fearful and had such an effect on him, that the next morning leaving the jail to appear before the judge to hear his death sentence, nobody recognised him, not even the Emperor, because fright had so changed him that instead of having as yesterday a fine red color, blond hair, pleasant eyes and a face to be looked at with pleasure, he had become like an unearthed corpse and had the hair and beard as white as a septuagenerian. The Emperor, suspecting that another criminal had been substituted, ordered an inquiry, how came this wonderful and sudden change. His desire of just vengeance changed to that of pity and he pardoned the young man, saying that the prisoner had already been sufficiently chastised.

A similar tale is told of a Spanish nobleman, by name Jacques Orsario (Vine, *Praefat in Somn. Scipionis*⁶) who, being in love with a maiden of the court of King Ferdinand of Spain, a predecessor of Charles V, made a plot with her, climbed a tree in the king's garden and hid there awaiting his time. Thereupon a little dog appeared, whose unfortunate barking caused the discovery of him. (Here clearly is a case of a dog barking up the right tree.) Orsario was made to come down, go to prison, and await the loss of his head. The prospect so frightened him that by next morning he was as white-haired as a man of 80. The king, either impressed by the sudden whitening, or unimpressed by moral laxities within his gates, pardoned him.

Aventius (*Annalim Boirum, Liber VII*) tells the following story. Louis II, duke of Bavaria, was suppressing towns in revolt in the latter half of the 13th century. He learned that his wife, Mattilde, was unfaithful; he returned in great haste, caused her to be thrown from the top of a tower, and married another. One night he had a vision which

revealed to him his error. His change of heart also changed the color of his hair, which turned white almost immediately. From remorse he founded a monastery which he named Furstfeld.⁷

Yet another story in which sudden blanching was linked to an even more ambitious construction project comes from India. Mumtaz Mahal, the favorite wife of Shah Jahan, died in his arms on June 7, 1631; she had borne him 14 children. Two weeks later Jahan's hair was reported as having turned white; he was wont to burst into tears whenever her name was mentioned. In her memory he built her a tomb, the Taj Mahal.

Lorry, in the 18th century,⁸ is among many historians who describe the overnight blanching of the hair of Henry of Navarre, after his escape from the horrors of the Massacre of St. Bartholomew (1572) by a feigned abjuration of the Protestant faith. Perry,⁹ however, says that it was exceeding grief over the decision to bar Henry from succession to the French throne, to which he was heir presumptive, made by the Edict of Nemours in 1585, that caused his mustache to whiten in the course of a few hours. Xavier¹⁰ tells yet another version. Henry, troubled by the prospects of war, put his head in his hands to meditate on his sorrows; when he lifted his head his mustache had grown white. It seems reasonable that sometime during his life, crowded with unpleasant incidents, Henry indeed became white-haired. The assassination of Henry III in 1589 made Henry of Navarre king of France. If Shakespeare is to be believed, he was the second Henry IV to have the experience of sudden whitening of the hair.

Guarino of Verona (1370-1460) was one of the restorers of classical learning. He studied Greek in Constantinople where for five years he was the pupil of Manuel Chrysoloires. He gathered a number of Greek manuscripts and had them sent to Italy by sea. The instant on hearing of their loss en route he was attacked by canities.⁶

Another celebrated Hellenist, Vauvilliers, became white-haired almost immediately after a terrible dream.⁶

Ludovico Sforza, artist, man of letters, economist, and patron of Bramante and Leonardo da Vinci was, unfortunately, also a politician. He was driven from Milan by Louis XII and, although reinstated by the Swiss, he was eventually delivered by them to the French in April 1500 and died a prisoner in the castle of Loches. It is said that his hair became suddenly white the night he fell into the power of his mortal enemy Louis XII.⁶ There is evidence that Byron may have been

thinking of Sforza in his poem *The Prisoner of Chillon*. That work opens with the lines:

My hair is gray, but not with years,
Nor grew it white,
In a single night,
As men's have grown from sudden fears.

Francisco Gonzaga, a contemporary of Sforza, marquis of Mantua and member of a princely Italian family, ordered that one of his relatives, suspected of conjugation, be confined in the tower of the imperial gates in order that he might be put through questioning or be put to torture. When this was announced to the accused he became quite white-haired. Moved by this phenomenon, Gonzaga pardoned him.⁶

The coincidence of sudden graying and the mention of towers is striking. Freudian scholars could no doubt explain the symbolism in a footnote. This tower symbolism coupled with allusion of royalty and given additional love interest is well illustrated in a report in the Portland, England, *Transcript* of Saturday, November 20, 1858:

It had long been the custom with the citizens of Vienna, whenever the Emperor made a triumphal entry into the city, for the sexton to stand on the pinnacle of the tower of St. Joseph's cathedral and wave a banner while the procession passed. When Leopold II was chosen Emperor at Frankfurt in 1790 and was about to make his grand entry into Vienna, the sexton of the cathedral, being a very old man, was unable to perform the duty of waving the banner which he had proudly discharged several times in his early life. He publicly declared that he would give free permission to any honest young man to woo and win his daughter who would relieve him of the responsibility of waving the banner. The offer was immediately accepted by Gabriel Petersheim, who had long since won the affection of the lady but who was never high in favor with the father. It was evening before the Emperor was expected to arrive, and the old sexton, deeming it a good opportunity to make a final disposition of the young man, bargained away his life with two desperadoes, Lawrence and Albert, who closed the trap-door of the upper stairway, thereby leaving the young man to cling to the slender sculptured spire, his feet resting on a surface scarcely 10 inches in circumference, exposed to the horrors of his position and the

frost of a winter night. He sustained himself till the morning, endowed with a strong constitution and firm will. When rescued, his curly locks were white as snow, his rosy cheeks yellow and wrinkled, and his eyes dim and sunken. That night of horror added forty years to his life.⁹

Sir Thomas More, chancellor of England and author of *Utopia*, differed with Henry VIII and, when he refused to attend the coronation of Anne Boleyn, was marked out for vengeance. He was committed to the Tower of London in 1534 and when he refused to take the oath of supremacy of the king against the pope, on the grounds of conscience, he was charged with high treason and sentenced to execution. On the night of July 6, 1535, which preceded the day of execution, Thomas More became white both in beard and hair.^{6, 9, 11, 12} His head, presumably grayhaired, was parboiled and then displayed on London Bridge.

Godfrey¹³ and Leonard¹⁴ are among several writers reporting that the red hair of Mary, queen of Scots, turned white in a few days through fright and grief. Wordsworth must have been aware of the legend, for in his *Lament of Mary, Queen of Scots* he writes:

And beauty, for confiding youth
Those shocks of passion can prepare
That kill the bloom before its time,
And blanch, without the owner's crime,
The most resplendent hair.

The legend may well have foundation in the macabre scene of her execution. Stefan Zweig describes the event as follows:

The first blow fell awry, striking the back of the head instead of severing the neck. A hollow groan escaped from the mouth of the victim. At the second stroke, the axe sank deep into the neck and the blood spurted out copiously. Not until a third blow had been given was the head detached from the trunk. Now came a further touch of horror. When Bulle (the executioner) wished to lift the head by the hair and show it to those assembled, he gripped only the wig, and the head dropped to the ground. It rolled like a ball across the scaffold; and when the executioner stooped once more to seize it, the onlookers could discern that it was that of an old woman with close-cropped and grizzled hair.¹⁵

Many writers give an account of Marie Antoinette's auburn tresses

becoming etiolated in a single night preceding her execution on October 16th, 1793,^{12, 16} some generously ascribing it to grief rather than fear. This legend is, however, clearly inexact. The fact that she had perfectly white hair when she mounted the scaffold was no novelty, as she was similarly white-haired at the time of the king's death nine months earlier. This is unmistakably stated by the Goncourt brothers in their *Histoire de Marie Antoinette*.¹⁷ It has cynically been conjectured that the keepers of her dungeon neglected to furnish their guest's dressing table with hair dyes. The iconoclast respects nothing, not even the gray hairs of royalty. If Charles A. Sainte-Beuve is to be believed, her whitening was indeed sudden, but occurred two years before her execution. Sainte-Beuve writes:

The last ray of joy and hope she knew was at the time of the flight to Varennes (June 21st, 1791). Three days later, how different was the prospect. The moment Madame Campan (the wife of the secretary of the cabinet) met her after her return from Varennes, the Queen removed her hat and bade her see the effect which sorrow had produced upon her hair. In a single night it had become as white as that of a woman of seventy. She was thirty six.¹⁸

General Charles Gordon defended besieged Khartoum for almost one year against the Mahdi. A few days before a British expeditionary force reached the town, the Mahdi victoriously entered it and Gordon was speared to death and later decapitated. Lytton Strachey in his *Eminent Victorians* states that the details of what passed within Khartoum during the last weeks of the siege are unknown. In the diary of Bordeini Bey, a Levantine merchant, we catch a few glimpses of the final stages of the catastrophe. In that account Gordon's hair is said to have turned snowy white, due to the anxiety he had undergone. Lytton Strachey describes Gordon in 1883, two years before his death, as follows: "His unassuming figure, short and slight with its half gliding, half tripping motion gave him a boyish aspect which contrasted oddly but not unpleasantly with the touch of grey on his hair and whiskers." This touch of gray fits in with a plausible explanation of his subsequent sudden whitening, as we shall see presently.

Two celebrated assassinations and an attempted one add to the catalogue of sudden blanching. The murder of Charles Ferdinand, duke de Berri, presumed to be the last of the Bourbon line, and the one likely

to get children, Louis Pierre Louval, on February 13th, 1820, was providential for the ultraroyalist and led to the second Richelieu ministry. A woman summoned before the Chamber of Peers to give evidence in the trial was so much affected that her hair became entirely white.^{3, 9}

John Libeny was convicted of an attempt to assassinate Emperor Franz Josef of Austria. The *London Times* correspondent at that time observed: "His hair, which was previously black, had become nearly snow-white in 48 hours preceeding his execution; it hung wildly about his head; his eyes seemed to be starting from their sockets and his whole frame was convulsed."¹²

Jim Fiske was an American financier who fought Vanderbilt for control of the Erie railway. He carried financial buccaneering to extremes, including an open alliance with the Tweed ring, bribery of legislators, and buying off judges. In 1872 he was shot and killed by E. S. Stokes, a former business associate in New York City. In Stokes' confinement the early turning of his hair to gray was a constant theme of newspaper reports at that time.¹⁴

In more modern times the subjects of hair whitening have become less illustrious but they nevertheless receive much attention. In a review of such cases it soon becomes apparent that few have in fact been actually observed by the physician making the report at the time of the alleged blanching or else they have been seen, but the phenomenon has been a matter of weeks rather than minutes.

Menninger-Lerchenthal¹⁹ reports that a man trapped in an air raid in Vienna saw his mother killed, and his hair subsequently turned white the next day. There is a considerable time lag between the alleged occurrence and the observation. MacLeod²⁰ tells of a motorcyclist who, following an accident, began to turn white-haired seven weeks later.

Klauder²¹ adds a case of an engineer, negligent in ship construction, who turned white-haired through anxiety over his prosecution, but his doctor did not see him at the time and, by the time he did carry out his examination, all he noted was alopecia areata.

Addinsell²² tells a singular story of a 22-year-old woman who saw a man have his throat cut and found the next morning that her pubic hair on the right side had turned white. Pigment had also vanished from the right labium major and the inner aspect of the right thigh.

Barahal²³ claims to have seen a man turn white-haired two weeks

after the accidental death of his son; he also gives a patient's account²⁴ of an overnight graying of his hair due to anxiety while serving in the army. However, this man was not seen until three months later.

Bernard²⁵ tells of a captured woman spy who turned white-haired after being sentenced to be shot. However, Bernard was not a witness to this but got the account from his father.

Ephraim²⁶ adds another case of blanching within six weeks of a subway accident. On reobservation later, this patient was found to have generalized vitiligo.

Today authorities are as divided about the possibilities of the occurrence of quick blanching as they were in the time of Leonhard Landois, who wrote that the problem was an old one that had escaped scientific research and was still clouded in mythical darkness.²⁷

Theories of how hair becomes gray have had almost as many proponents as reports of cases. Among those that once enjoyed popularity, the following merit mention:

- 1) Pigmented hair falls out and is replaced by depigmented hair.²⁸
- 2) This theory was denied by Brown-Sequard, who plucked the few gray hairs of his own to find other long gray hairs in the same area the following morning.²⁹ Brown-Sequard argued therefore that pigmented hairs change to gray. If the latter theory is true, the hair would have to change completely, for rarely does one find one hair showing both pigmented and gray portions.

- 3) Phagocytic cells are produced by hair medulla.³⁰ No such cells have been demonstrated, and the theory has been abandoned.

- 4) The commonest recourse of the proponents of the sudden-blanching school has been the presence of air bubbles in the hair shaft. The argument runs that due to a psychic insult, air bubbles enter the shaft of the hair and produce a white appearance through the reflection of light, even though the pigment remains. One proponent²³ even likens the process to the bends of deep-sea divers, ignoring the essential atmospheric conditions necessary for the latter, and also the fact that it is not air but nitrogen alone that causes caisson disease. Most people have not been able to demonstrate any gas bubbles in suddenly graying hair, and no one has seen it in normal human gray hair.

While these theories hardly stand up to even indulgent criticism, there is one explanation which appears plausible. Alopecia areata is a disease in which either patchy or diffuse hair loss occurs, often in a

matter of days and sometimes to an alarming degree. The cause is unknown. Many times a psychic event has been linked to its onset, but whether this was a post or praeter hoc relation is disputed. For unknown reasons the hair loss in alopecia arcata confines itself almost exclusively to pigmented hairs; white hairs remain. Moreover when hair regrows in areas of previous loss, it often does so without restoration of its previous color. It is reasonable that in a person who had a mixture of pigmented and white hair, in whom rapid, diffuse pigmented hair loss occurred, would appear to have grown white overnight.

The following recent case reports seem to bear out the preferential loss of pigmented hairs as causing the phenomenon.

Burton³¹ cites a 55-year-old man with gray hair who over a three-week period lost the dark hair and only a few white hairs. The remaining black hairs were easily plucked out. The tell-tale exclamation-point marks of broken hairs of alopecia areata were evident.

Damste³² had a 42-year-old patient with apparently normal pigmented hair. Rapid falling of both scalp and facial hair left previously unnoticed white hairs, giving him the appearance of whitening.

Helm³³ reported a 45-year-old man with sudden diffuse hair loss. This patient formerly had brown hair mixed with a few white hairs. In three weeks he lost almost all his brown hair. This was followed by patchy alopecia areata, including that of the right eyebrow. The man eventually regrew a full head of white hair.

Klingmuller,³⁴ Lehnert,³⁵ and Montgomery³⁶ described similar cases.

Undoubtedly not all cases from the past fit into this category. Some stories are reported almost verbatim by author after author with hardly a challenge to their veracity. Many are based on little else but folklore; some probably could be explained by the unavailability of hair dyes. In others the overnight drama, as so often in overnight success, took weeks or months in reality. But sudden whitening appears to have a logical explanation. One can only speculate on whether psychic conflicts can herald alopecia areata. Dogmatic interpretation of ancient lore and hindsight diagnosis are dangerous exercises; it would not be the first time that a promising career would founder on a permanent wave.

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